

The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application. Any changes or deletions are without prejudice or disclaimer of Applicants' right to present prior versions at a later time--e.g., in this application or in a continuing application.

Listing of The Claims:

1. (Currently Amended) A circuit for adaptively amplifying an input signal, the circuit comprising:

an adaptive filter connected to receive the input signal and to amplify a predetermined frequency range of the input signal by an amount based on an amplification control signal input to the adaptive filter to generate an amplified input signal;

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a comparator connected to receive the amplified input signal from the adaptive filter and a predetermined threshold signal, the comparator outputting a ~~digital~~ comparison signal ~~indicating whether~~ that compares the amplified input signal ~~is greater than~~ to the predetermined threshold signal; and

a filter adaptation circuit connected to receive the ~~digital~~ comparison signal ~~and the input signal~~ and to modify the amplification control signal based on the ~~digital~~ comparison signal and based on a known training pattern ~~the input signal~~.

2. (Original) The circuit of Claim 1, wherein the input signal is a SCSI (small computer system interface) signal and the adaptive filter reduces inter-symbol interference (ISI) in the SCSI signal.

3. (Original) The circuit of Claim 1, wherein the predetermined frequency range amplified by the adaptive filter consists of high frequency components of the input signal.

4. (Original) The circuit of Claim 1, wherein the adaptive filter is a third order Bessel filter.

5. (Currently Amended) The circuit of Claim 1, further comprising a digital-to-analog converter ~~converted~~ connected between the adaptive filter and the filter adaptation circuit, the digital-to-analog converter converting a digital version of the amplification control signal output from the filter adaptation circuit to an analog version of the amplification control signal for input to the adaptive filter.

6. (Currently Amended) The circuit of Claim 5, wherein the filter adaptation circuit ~~further~~ comprises:

a first circuit connected to receive the digital comparison signal, the known training pattern, and a system clock signal, the first circuit converting the digital comparison signal, the known training pattern, and the system clock signal into a first output signal that is asserted on a falling edge of the known training pattern ~~a digitized version of the input signal~~ when the comparison signal indicates that the input signal is above a level of the predetermined threshold signal and a second output signal that is asserted on the falling edge of the known training pattern ~~digitized version of the input signal~~ when the comparison signal indicates that the input signal is below the level of the predetermined threshold signal; and

a second circuit connected to receive the first and second output signals and to increase the amplification control signal when the first output signal is asserted and the

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second output signal is not asserted and to decrease the amplification control signal when the first output signal is not asserted and the second output signal is asserted.

7. (Currently Amended) A method of canceling inter-symbol interference (ISI) in a SCSI (~~small computer system interface~~) an input signal, the method comprising:
amplifying high frequency components of ~~an input SCSI~~ the input signal by an amount based on an amplification control signal to generate an amplified input signal;
comparing the amplified input signal with a predetermined threshold level to generate a comparison signal; and
iteratively modifying the amplification control signal based on ~~a result of the comparison of the amplified signal with the predetermined threshold level~~ the comparison signal and based on a known training pattern.

8. (Currently Amended) The method of Claim 7, wherein said modifying the amplitude amplification control signal includes:

increasing the amplitude amplification control signal ~~on a falling edge of a digitized version of the input signal~~ based on the known training pattern and based on when the comparison signal indicates that the input signal is above the predetermined threshold level; and

decreasing the amplitude amplification control signal ~~on the falling edge of the digitized version of the input signal~~ based on the known training pattern and based on when the comparison signal indicates that the input signal is below the predetermined threshold level.

9. (Currently Amended) The method of Claim 7, wherein a voltage level of the predetermined threshold level is a voltage offset from ~~the~~ a voltage level used to convert the input SCSI signal to a digital value.

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10. (Currently Amended) The method of Claim 9, wherein ^{the} a voltage level of
the predetermined threshold ~~voltage~~ level is below ~~the~~ a voltage level used to convert the
input SCSI signal to ~~a digital~~ the digital value.

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11. (Original) The method of Claim 7, wherein the amplification of the high
frequency components is performed using a third order Bessel filter.

12. (New) The circuit of Claim 1, wherein the comparison signal indicates
whether the amplified input signal is greater than the predetermined threshold signal.
